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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,943	03/02/2004	Hidetomo Tanaka	1232-5316	4123
27123	7590	06/23/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P.			SEVER, ANDREW T	
3 WORLD FINANCIAL CENTER			ART UNIT	
NEW YORK, NY 10281-2101			PAPER NUMBER	

2851

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,943

Applicant(s)

TANAKA, HIDETOMO

Examiner

Andrew T. Sever

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 16, 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17, 18 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species I (claims 1-15, 17, 18, and 21-24) in the reply filed on 5/27/2005 is acknowledged. The traversal is on the ground(s) that undue diverse search is not required. This is not found persuasive because the four species are clearly different as indicated in application's specification and would potentially require different pieces of prior art in order to reject them. If applicant believes that the species are not patentably distinct applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case, currently it is not clear if applicant is admitting that they are obvious variants.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 16, 19, and 20 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5/27/2005.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claims 1-12 are objected to because of the following informalities: claims 1 and 5 of which the other claims are dependent on contain grammatical errors rendering the claims unclear. Appropriate correction is required.

The fourth paragraph of claim 1 includes the light “and acting optically one of incident light onto the first” this does not make sense, at least the word “on” should be inserted before “one”. The fourth paragraph of claim 5 contains a similar problem. Applicant should review all claims to insure readability and that the claims are clear.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-15, 17, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Takizawa (US 6,657,680.)

Takizawa teaches in figure 10 an optical unit used in a projection type image display apparatus, the optical unit comprising:

Art Unit: 2851

A first optical element formed of a glass material (prism 45 which is specified in column 11 line 18 to be made of glass), the first optical element performing at least one of color separation and color combination;

A holding member attached to the first optical element (82); and

A second optical element held by the holding member, the second optical element being formed of a resin material and acting optically on one of incident light onto the first optical element and emergent light from the first optical element (the second element is a visual angle compensation film or polarizer see column 9 lines 21-35 and column 3 lines 31-34, these films are generally made of resin see for example applicant's specification page 2 which specifies that the prior art films are made of polycarbonate layering which is a type of resin; further Takizawa teaches that the frame holding the liquid crystal device and at least part of the film is made of resin as opposed to the metal of the holding member see column 9 lines 5-14);

Wherein the following condition is satisfied:

$$a_1 < a_3 \leq a_2$$

Where a_1 , a_2 , and a_3 represent linear expansion coefficients of the materials forming the first optical element (glass prism), the second optical element (compensating film and/or resin frame), and the holding member (metal frame member), respectively (see column 11 line 24-39.)

With regards to applicant's claim 2:

Art Unit: 2851

A3 is closer to a2 then to the a1. (It is not clear how close is closer as applicant claims it, however it is known that optical glass has a very low linear expansion coefficient compared to metal and resin. See also column 3 lines 5-27.)

With regards to applicant's claim 3:

A gap is formed between the film and the prism. See column 11 lines 45-52.

With regards to applicant's claim 4:

The terms retardation film, polarizing film used in column 3 lines 31-34 generally refer to a wavelength-selective polarization-rotating element (even if in some cases they rotate all visual wavelengths they are still selective as they do not rotate the entire spectrum.)

With regards to applicant's claims 5, 7, 9, and 10:

See above, the film holder as shown in the drawings would only allow noticeable displacement in the orthogonal direction to the optical axis as that would be the direction the frames also expand.

With regards to applicant's claims 6 and 8:

See column 9 lines 36-46 as well as column 10 lines 27-42 in general optical adhesives are not as hard as metal.

Art Unit: 2851

With regards to applicant's claims 11 and 12:

See figure 5, which shows a projection lens (45) and an optical system (44, 45, 441, 441R-G) accordingly to claims 1 or 5 respectively (see above).

With regards to applicant's claim 13:

See the with regards to applicant's claim 2:

With regards to applicant's claims 14 and 15:

See the with regards to applicant's claims 6 and 8.

With regards to applicant's claim 17:

See the with regards to applicant's claim 3.

With regards to applicant's claim 18:

See the with regard to applicant's claims 11 and 12.

7. Claims 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al. (US 6,854,849.)

Suzuki teaches in figure 16 an optical system comprising:

A color separation element (2) which separates light into a first color light, a second color light and a third color light;

A color combining element (5) which performs color combination of the first color light, the second color light and the third color light;

A first polarization beam splitter (3A) which guides the first color light from the color separation element to a first image forming element (61A) and guides the first color light from the first image forming element to the color combining element;

A second polarization beam splitter (4A) which guides the second color light from the color separation element to a second image forming element (62A), guides the second color light from the second image forming element to the color combining element, guides the third color light from the color separation element to a third image forming element (63A) , and guides the third color light form the third image forming element to the color combining element;

A base, which holds the color separation element, the color combining element, the first polarization beam splitter, and the second polarization beam splitter (the components are mounted in some kind of base as is well known in the art else they would not be able to maintain their alignment);

A first substrate (coupler 640), which holds the first polarization beam splitter with respect to the color-combining element;

And

A second substrate (coupler 650 as well as 670), which holds the second polarization beam splitter with respect to the color-combining element.

Art Unit: 2851

With regards to applicant's claim 22:

All of the listed components are taught to be some kind of glass by Suzuki, see column 17 lines 59-67 with regards to the substrates, while the prism are taught in columns 13 and 14.

With regards to applicant's claim 23:

See above.

With regards to applicant's claim 24:

First imager is Green, second imager is red, and the third imager is blue. The imagers are clearly of the reflective type.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6,053,616 to Fujimori et al. see figures 4-6 which show mountings made of different materials for mounting LCD panels to a prism which include polarization sheets. A description of what some of the parts are made of is found in column 10.

Art Unit: 2851

US 6,460,998 to Watanabe teaches in figure 6 and 7 polarizer holders.


US 6,833,953 to Miyazawa et al. teaches a polarizer and mounts in figure 3 and 7 which are described in columns 7 and 8 with regards to materials and linear expansion coefficients.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS


JUDY NGUYEN
SUPERVISORY PATENT EXAMINER